

# Mineral Industry Surveys

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## COPPER IN JULY 1999

Domestic mine, smelter, and refinery production were all down significantly during the first 7 months of 1999 when compared to the same period in 1998, reflecting the numerous cutbacks and closures that have previously been announced. Increased consumption of refined copper in July, which was up by 5% compared to that in July 1998, was primarily responsible for a 1% consumption rise during the first 7 months of 1999, when compared to consumption during the same period in 1998. Copper inventories in July declined slightly for the second consecutive month as copper was withdrawn from Comex warehouses in Arizona to cover the shortfall in domestic refined production.

Copper prices began a sharp rise at the end of June and by July 9, the producer price had risen by more than 20%, to \$0.81. The price spread between Comex and LME prices widened with rising prices. Earlier, during the third week in June, the spot price for Comex copper averaged \$0.67 and traded at about a one cent per pound premium to the spot LME copper price. By July 9, the spot price had increased to \$0.77 and the spread had increased to 1.8 cents per pound, indicating the selective tightness in the U.S. market. The price rise was sparked by announcements of production cutbacks by BHP Copper Co. and Phelps Dodge Corporation (See Copper in May 1999), followed closely by the announced shutdown of Falconbridge's Kidd Creek smelter on July 8, when unionized workers began a strike at that plant (Platt's Metals Week, 1999b).

North American production had already been reduced by previous U.S. mine cutbacks and a labor dispute that had closed the Highland Valley Mine in British Columbia. According to Rio Algom, the majority owner of the 170,000-ton-per-year Highland Valley Mine, production might not resume until sometime in 2001 (Platt's Metals Week, 1999a). Copper prices fluctuated near the higher level through July and August, before renewing their upward momentum in the second week of September, when

the Comex price rose to \$0.82.

On July 15, Cyprus Amax Minerals Company and ASARCO Incorporated announced an agreement, unanimously approved by the Boards of both companies, that combined the two companies in a merger-of-equals transaction. The new company was to be named Asarco Cyprus Incorporated. Under terms of the initial proposal, Cyprus Amax shareholders would receive 0.765 shares of Asarco Cyprus stock for each share of Cyprus Amax common stock, and Asarco shareholders would receive an even exchange of stock. The merger would create the world's second largest copper mining company with annual production of 900,000 metric tons and was expected to realize a combined operating cost reduction of \$150 million per year. Cash operating costs for copper production would be less than 50 cents per pound. Corporate headquarters were to be in New York and operational headquarters in Tempe, AZ (Cyprus Amax Minerals Company, 1999).

### Merger Update

On August 20, Cyprus Amax and Asarco jointly announced that each had scheduled shareholder meetings for September 30 to approve the previously announced merger. Moreover, it was announced that, based on further review of combined operations, the anticipated operating cost savings from the merger had escalated to \$200 million per year. As part of the cost savings, Cyprus' Denver office would be closed, and Asarco's New York office would be relocated in New Jersey. The two companies also announced receipt of an unsolicited proposal from Phelps Dodge Corp. to negotiate an agreement for Phelps Dodge to acquire both companies in exchange for Phelps Dodge stock; 0.3756 Phelps Dodge shares for each Asarco share and 0.2874 Phelps Dodge shares for each Cyprus Amax share. Cyprus Amax and Asarco further indicated their intent to proceed with their own merger, rejecting Phelps

Dodge's solicitation (ASARCO Incorporated, 1999a).

- C On August 25, Cyprus Amax and Asarco jointly announced improved terms for their own merger and a willingness to negotiate with Phelps Dodge on a 3-way merger under certain conditions. Both companies were willing to negotiate with Phelps Dodge if proposed exchange ratios for Asarco and Cyprus Amax were increased 0.5300 and 0.4055 per share, respectively, and if Phelps Dodge agreed to underwrite the risk of antitrust action. Asarco and Cyprus improved the terms of their own merger by including a \$5.00 per share payment to stockholders of the combined Asarco Cyprus Inc. (Cyprus Amax Minerals and ASARCO Incorporated, 1999a).
- C On August 27, Phelps Dodge announced that it was rejecting the offer of a 3-way merger and that it intended to take its acquisition offer directly to Asarco and Cyprus Amax shareholders. The company also announced that it had filed documents with the Securities and Exchange Commission that outlined its plan to solicit proxies from Cyprus and Asarco shareholders, and that it would file suit against the board of directors of Cyprus and Asarco alleging a breach of fiduciary duty. In addition, Phelps Dodge scheduled a special meeting of its shareholders on October 13 to approve its proposed issuance of shares. On August 29, Cyprus and Asarco responded by urging its shareholders to reject Phelps Dodge's bid as one simply intended to disrupt their own proposed merger (Watts, W. L., 1999).
- C On September 7, Cyprus Amax and Asarco issued a joint press release urging their shareholders to approve their merger of equals on September 30, under terms previously announced, and to reject Phelps Dodge's offer as being inequitable on the basis of percentage ownership. The two companies claimed the Asarco-Cyprus stockholders would own only 43% of the 3-way enterprise yet contribute 57% of production, 61% of reserves, four of the five lowest cost mines, 91% of cash assets, and other cost advantages. Cyprus Amax and Asarco also warned that conditions of the 3-way merger could not be met prior to their self-imposed September 30 deadline for voting on their own merger (Cyprus Amax Minerals and ASARCO Incorporated, 1999b).
- C On September 10, Phelps Dodge announced that it had filed its premerger notifications with the Federal Trade Commission and Antitrust Division of the U.S. Department of Justice under the Hart-Scott-Rodino Act for its proposed acquisitions of Asarco and Cyprus Amax, and that the 30-day waiting period would expire on October 10 (Phelps Dodge Corp., 1999a).
- C On September 20, Asarco announced the filing of a complaint

seeking an injunction and damages against Phelps Dodge in Federal Court alleging that Phelps Dodge's unsolicited takeover attempt violated U.S. antitrust laws. Asarco cited Phelps Dodge's failure to make an early pre-merger notification under the Hart-Scott-Rodino Act seeking approval from the Justice Department regarding antitrust implications of the merger. Cyprus and Asarco had already received such clearances for their merger (ASARCO Incorporated, 1999a).

- On September 22, Phelps Dodge announced that it had increased its offer to acquire Asarco and Cyprus Amax and had added cash components to both offers that would provide approximately 40% premiums to shareholders of Asarco and Cyprus Amax. The new offer was to acquire Asarco shares for 0.2880 Phelps Dodge shares plus \$9.00 in cash and Cyprus shares for 0.2203 Phelps shares and \$6.89 in cash—equivalent to \$25.47 per share and \$19.49 per share, respectively. All cash or all stock alternatives were also offered (Phelps Dodge, 1999b). On September 24, Phelps Dodge announced that it had received antitrust clearance from the U.S. Department of Justice for its proposed acquisition of Asarco and Cyprus Amax and that no divestitures would be required (Phelps Dodge Corp., 1999c).

## References Cited

- ASARCO Incorporated, 1999a, Asarco sues Phelps Dodge seeking clarification of antitrust issues: New York, ASARCO Incorporated press release, September 20, 2 p.
- 1999b, Cyprus and Asarco set shareholders meeting: New York, ASARCO Incorporated press release, August 20, 2 p.
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- Cyprus Amax Minerals and ASARCO Incorporated, 1999a, Asarco and Cyprus Amax improve terms of combination and invite Phelps Dodge to negotiate improved deal: New York and Denver, Cyprus Amax Minerals and ASARCO Incorporated press release, August 25, 4 p.
- 1999b, Cyprus Amax and Asarco urge shareholders to vote for their proposed merger on September 30: New York and Denver, Cyprus Amax Minerals and ASARCO Incorporated press release, September 7, 2 p.
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- 1999b, Phelps Dodge increases offer to acquire Asarco and Cyprus Amax; adds substantial cash component to both offers: Phoenix, Phelps Dodge Corp. press release, September 22, 2 p.
- 1999c, Phelps Dodge receives antitrust clearance for offers to acquire Asarco and Cyprus Amax: Phoenix, Phelps Dodge Corp. press release, September 24, 1 p.
- Platt's Metals Week, 1999a, Highland Valley looks to 2001: Platt's Metals Week, v. 70, no. 28, July 12, p. 4.
- 1999b, Striking workers shut down Kidd Creek smelter: Platt's Metals Week, v. 70, no. 28, July 12, p. 3.
- Watts, W. L., 1999, Asarco, Cyprus urge rejection of hostile bid claim Phelps Dodge merely trying to break up merger: CBS Market Watch, accessed at URL <http://cbs.marketwatch.com>, August 31, 2 p.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

	Source table 2/	1998 p/	1999		
			June	July	January - July
<b>Production:</b>					
<b>Primary:</b>					
Mine, recoverable	(2)	1,860,000	133,000	132,000	1,010,000
Smelter 3/	(3)	1,490,000	77,100	85,800	708,000
<b>Refinery:</b>					
<b>Electrolytic:</b>					
Domestic	(4)	1,290,000	95,500	79,200	678,000
Foreign	(4)	238,000	12,100	14,600	134,000
Electrowon	(4)	590,000	47,200 t/	46,500	336,000
Total	(4)	2,120,000	155,000 t/	140,000	1,150,000
<b>Secondary recoverable copper:</b>					
Refineries	(5)	336,000	17,500 t/	21,200	137,000
Ingot makers 4/	(5)	132,000	11,000	11,000	76,800
Brass and wire-rod mills	(5)	811,000	69,800	65,900	486,000
Foundries, etc.	(5)	55,400	4,610 t/	4,610	32,300
<b>Consumption:</b>					
Total apparent	(8)	3,010,000	248,000	NA	NA
Refined (reported)	(7)	2,880,000	254,000 t/	240,000	1,740,000
Purchased copper-base scrap	(9)	1,720,000	149,000	146,000	1,070,000
<b>Stocks at end of period:</b>					
Total refined	(11)	531,000	637,000 t/	631,000	XX
Blister, etc.	(11)	160,000	135,000	136,000	XX
<b>Prices:</b>					
U.S. producer cathode (cents per pound) 5/	(12)	78.641	69.037	79.677	70.654
<b>Imports: 6/</b>					
Ores and concentrates 7/	(14)	217,000	60,500	NA	NA
Refined	(14)	683,000	63,800	NA	NA
<b>Exports: 6/</b>					
Ores and concentrates 7/	(15)	36,500	2,080	NA	NA
Refined	(15)	86,200	4,240	NA	NA

p/ Preliminary. t/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ Monthly data estimated based on 1997 monthly average.

5/ Source: Platt's Metals Week.

6/ Source: Bureau of the Census.

7/ Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER  
IN THE UNITED STATES 1/

(Metric tons)

Period	State		Total
	Arizona	Others 2/	
1998: p/			
July	102,000	55,700 r/	158,000
August	102,000	61,700 r/	164,000 r/
September	97,200 r/	57,000 r/	154,000
October	96,100 r/	60,100 r/	156,000
November	97,500 r/	57,600 r/	155,000
December	101,000	56,700 r/	158,000 r/
January - July r/	699,000	377,000	1,080,000
Year	1,190,000	670,000 r/	1,860,000
1999:			
January	99,400	55,500	155,000
February	89,600	48,300	138,000
March	102,000	56,800	159,000
April	95,000	49,200	144,000
May	95,500 r/	47,800 r/	143,000 r/
June	88,100	45,300	133,000
July	87,200	45,100	132,000
January - July	657,000	348,000	1,010,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes production from Alaska, Idaho, Missouri, Montana, Nevada, New Mexico, Tennessee, and Utah.

TABLE 3  
COPPER PRODUCED AT SMELTERS IN THE  
UNITED STATES, BY SOURCE 1/ 2/

(Metric tons, copper content)

Period	Domestic and foreign ores		Scrap	Total
1998: p/				
July	124,000		19,200	143,000
August	121,000		19,700	141,000
September	116,000		18,000	134,000
October	156,000		17,100	173,000
November	134,000		19,000	153,000
December	120,000		18,000	138,000
January - July	839,000 r/		140,000 r/	979,000
Year	1,490,000		232,000	1,720,000
1999:				
January	106,000		18,300	125,000
February	113,000		16,100	129,000
March	116,000		14,700	131,000
April	124,000		15,600	140,000
May	85,400		14,000	99,400
June	77,100		18,600	95,700
July	85,800		18,100	104,000
January - July	708,000		116,000	823,000

p/ Preliminary. r/ Revised.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

Period	Primary materials				Scrap			Total refined
	Electrolytically refined 2/		Electrowon	Total	Electro-lytically refined 2/	Fire refined	Total	
	Domestic 3/	Foreign						
1998: p/								
July	93,300	22,500	51,400	167,000	18,000	11,500	29,500	197,000
August	106,000	19,000	50,900	176,000	11,800	13,400	25,200	201,000
September	102,000	23,200	48,300	174,000	15,600	9,380	25,000	199,000
October	107,000	26,100	48,000	181,000	17,500	15,500	33,100	214,000
November	106,000	24,400	50,000	181,000	14,700	8,630	23,300	204,000
December	115,000	22,300	51,300	189,000	17,000	9,320	26,400	215,000
January - July	757,000 r/	123,000 r/	342,000	1,220,000 r/	125,000 r/	78,200 r/	203,000 r/	1,420,000
Year	1,290,000	238,000	590,000	2,120,000	202,000	134,000	336,000	2,460,000
1999:								
January	85,400	26,700	50,300	162,000	12,500	7,230	19,700	182,000
February	84,200	24,200	45,700	154,000	12,400	9,100	21,500	176,000
March	117,000	25,600	50,500	193,000	14,700	8,970	23,700	217,000
April	111,000	19,100	47,800	178,000	12,100	5,550	17,700	195,000
May	106,000	12,300	47,700	166,000	11,300	4,880	16,200	182,000
June	95,500	12,100	47,200 r/	155,000 r/	12,500	5,010	17,500	172,000 r/
July	79,200	14,600	46,500	140,000	13,500	7,660	21,200	161,000
January - July	678,000	134,000	336,000	1,150,000	89,000	48,400	137,000	1,290,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

Period	Refineries 2/		Ingot makers 3/		Brass and wire-rod mills		Foundries, etc. 4/		Total 5/
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1998: p/									
July	5,810	23,600	2,930	8,040	60,300	3,390	956	3,660	109,000
August	7,550	17,600	2,930	8,040	61,800	2,930	956	3,660	105,000
September	4,770	20,200	2,930	8,040	67,100	3,080	956	3,660	111,000
October	9,630	23,400	2,930	8,040	67,000	2,690	956	3,660	118,000
November	4,090	19,200	2,930	8,040	63,400	2,790	956	3,660	105,000
December	4,500	21,900	2,930	8,040	61,800	1,370	956	3,660	105,000
January - July	42,800 r/	160,000 r/	20,500 r/	56,300 r/	460,000 r/	17,500	6,690 r/	25,600 r/	789,000 r/
Year	73,300	263,000	35,200	96,500	781,000	30,400	11,500	43,900	1,330,000
1999:									
January	3,290	16,400	2,930	8,040	64,600	2,740	956	3,660	103,000
February	4,480	17,000	2,930	8,040	66,400	3,030	956	3,660	106,000
March	5,130	18,600	2,930	8,040	72,800	3,070	956	3,660	115,000
April	3,830	13,800	2,930	8,040	67,200	2,540	956	3,660	103,000
May	3,630	12,500	2,930	8,040	66,200	2,020	956	3,660	100,000
June	3,770 r/	13,700 r/	2,930	8,040	67,400	2,410	956	3,660	103,000 r/
July	5,220	16,000	2,930	8,040	64,300	1,630	956	3,660	103,000
January - July	29,400	108,000	20,500	56,300	469,000	17,400	6,690	25,600	733,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; data estimated based on 1997 annual data.

4/ Data estimated based on 1997 annual data.

5/ Does not include an estimate, based on reported 1997 data, of 3,900 tons per month from new scrap and 2,530 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire rod mills	Brass mills	Wire rod mills	Brass mills	Wire rod mills
1998: p/						
July	130,000	166,000	126,000	165,000	57,100	41,000
August	130,000	160,000	129,000	167,000	57,900	33,900
September	140,000	172,000	138,000	174,000	59,600	31,300
October	138,000	185,000	138,000	185,000	60,300	30,700
November	132,000	181,000	133,000	172,000	59,300	39,800
December	128,000	144,000	125,000	153,000	62,500	30,900
January - July	919,000 r/	1,260,000 r/	926,000 r/	1,250,000	XX	XX
Year	1,590,000	2,100,000	1,590,000	2,100,000	XX	XX
1999:						
January	138,000	180,000	141,000	174,000	59,500	36,800
February	134,000	178,000	135,000	175,000	58,000	40,100
March	139,000	190,000	146,000	193,000	50,500	37,100
April	142,000	182,000	138,000	184,000	54,000	35,500 r/
May	138,000	177,000	137,000	176,000	53,900	36,200
June	138,000	184,000 r/	140,000	183,000	51,000	36,800 r/
July	122,000	171,000	125,000	172,000	47,800	35,900
January - July	950,000	1,260,000	963,000	1,260,000	XX	XX

p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

Period and item	Wire rod mills	Brass mills 2/	Other plants 3/	Total
1998: p/				
July	173,000	50,500	4,310	228,000
August	165,000	54,800	4,310	224,000
September	165,000	56,100	4,310	226,000
October	196,000	57,100	4,310	257,000
November	190,000	52,900	4,310	247,000
December	149,000	51,600	4,310	204,000
January - July	1,310,000	386,000 r/	30,200 r/	1,720,000 r/
Year	2,170,000	659,000	51,700	2,880,000
1999:				
January	186,000	58,400	4,310	249,000
February	185,000	50,900	4,310	240,000
March	209,000	55,500	4,310	269,000
April	184,000	53,800	4,310	242,000
May	185,000 r/	59,900	4,310	250,000 r/
June	189,000	59,900	4,310	254,000 r/
July:				
Cathodes	176,000	41,600	944	218,000
Wire bars	--	--	W	W
Ingots and ingot bars	--	1,520	1,540	3,070
Cakes and slabs	--	6,710	W	6,710
Billets and other	1,270	8,700	1,820	11,800
Total	177,000	58,500	4,310	240,000
January - July	1,320,000	397,000	30,200	1,740,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1997, brass mills consumed 1,500 tons of refined lead, 700 tons of pig tin, 2,300 tons of refined nickel, and 54,400 tons of slab zinc.

3/ Consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers is estimated based on 1997 annual data.

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

Period	Refined copper production	Copper in old scrap 2/	Refined general imports 3/	Refined exports 3/	Stock change during period	Apparent consumption
1998: p/						
July	167,000	41,300	55,400	7,470	7,440	249,000
August	176,000	34,800	49,600	6,360	14,700	239,000
September	174,000	37,500	77,000	5,820	37,700	245,000
October	181,000	40,400	53,200	4,990	15,500	254,000
November	181,000	36,300	70,300	3,610	37,100	247,000
December	189,000	37,500	54,700	6,200	64,600	210,000
January - June	1,050,000 r/	236,000 r/	365,000	51,800	40,200 r/	1,560,000 r/
Year	2,120,000	464,000	725,000	86,200	217,000	3,010,000
1999:						
January	162,000	33,400	64,700	2,350	26,000	232,000
February	154,000	34,300	58,500	1,120	24,700	221,000
March	193,000	35,900	86,000	1,840	31,300	282,000
April	178,000	30,600	66,300	1,340	28,000	245,000
May	166,000	28,800	57,100	1,630	2,160	248,000
June	155,000 r/	30,400 r/	60,600	4,240	(6,510) r/	248,000
July	140,000	31,800	NA	NA	(5,510)	NA
January - June	1,010,000	193,000	393,000	12,500	106,000	1,480,000

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and estimates for annual reporters and of non-copper-base materials based on 1997 data.

3/ Source: Bureau of the Census.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers 2/		Brass and wire-rod mills 3/		Foundries, etc. 2/		Total scrap used
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1998: p/									
July	7,150	30,900	3,910	11,700	76,500	3,460	1,130	4,090	139,000
August	8,950	32,500	3,910	11,700	78,000	3,010	1,130	4,090	143,000
September	5,910	25,800	3,910	11,700	84,200	3,190	1,130	4,090	140,000
October	10,600	28,600	3,910	11,700	84,800	2,770	1,130	4,090	148,000
November	5,270	29,800	3,910	11,700	80,400	2,870	1,130	4,090	139,000
December	4,900	27,500	3,910	11,700	78,500	1,440	1,130	4,090	133,000
January - July	51,800 r/	219,000 r/	27,300 r/	82,000 r/	581,000	18,100	7,940 r/	28,600 r/	1,020,000 r/
Year	87,500	363,000	46,900	141,000	987,000	31,400	13,600	49,100	1,720,000
1999:									
January	4,360	43,300	3,910	11,700	81,200	2,800	1,130	4,090	153,000
February	5,490	42,800	3,910	11,700	83,900	3,130	1,130	4,090	156,000
March	5,620	39,600	3,910	11,700	92,500	3,170	1,130	4,090	162,000
April	4,340	38,300	3,910	11,700	85,700	2,620	1,130	4,090	152,000
May	4,310	36,400	3,910	11,700	83,900	2,090	1,130	4,090	148,000
June	4,390	36,100	3,910	11,700	85,500	2,500	1,130	4,090	149,000
July	5,380	37,300	3,910	11,700	80,700	1,690	1,130	4,090	146,000
January - July	33,900	274,000	27,300	82,000	594,000	18,000	7,940	28,600	1,070,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data estimated from 1997 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

Scrap type and processor	1998 p/		1999			
	January - July	Year	May	June	July	January - July
No. 1 wire and heavy:						
Smelters and refiners	90,700 r/	139,000	5,940	6,800	9,660	51,800
Brass and wire-rod mills	240,000 r/	411,000	35,900	36,400	36,300	253,000
No. 2 mixed heavy and light:						
Smelters and refiners	111,000 r/	199,000	10,600	10,200	9,560	87,600
Brass and wire-rod mills	20,400	32,600	1,080	1,680	1,100	14,100
Total unalloyed scrap:						
Smelters and refiners	201,000 r/	338,000	16,600	17,000	19,200	139,000
Brass and wire-rod mills	260,000 r/	443,000	37,000	38,100	37,400	267,000
Red brass: 3/						
All plants	37,200 r/	63,200	5,270	5,130	5,110	36,600
Leaded yellow brass:						
All plants	247,000 r/	422,000	35,500	36,600	32,700	248,000
Yellow and low brass:						
All plants	35,500	60,700	5,910	5,760	5,840	42,700
Cartridge cases and brass:						
Smelters and refiners	W	W	W	W	W	W
Brass mills	48,900 r/	81,700	6,770	6,900	5,700	46,300
Auto radiators:						
Smelters and refiners	36,500 r/	61,400	6,040	5,950	5,950	42,000
Bronzes:						
Smelters and refiners	7,060 r/	12,100	1,010	1,010	1,010	7,060
Brass mills	7,760 r/	13,600	942	602	638	5,880
Nickel-copper alloys:						
All plants	10,100	17,100	1,410	1,670	1,820	12,000
Low grade & residues:						
Smelters and refiners	73,200 r/	119,000	24,000	23,400	23,400	166,000
Other alloy scrap: 4/						
Smelters and refiners 5/	11,900 r/	20,200	1,580	1,590	1,590	12,800
Brass mills	2,680	4,620	400	399	399	2,830
Total alloyed scrap:						
Smelters and refiners	178,000 r/	300,000	39,800	39,100	39,100	278,000
Brass mills	339,000 r/	575,000	49,000	49,900	45,000	344,000
Total scrap:						
Smelters and refiners	380,000 r/	638,000	56,400	56,100	58,300	417,000
Brass and wire-rod mills	599,000	1,020,000	86,000	88,000	82,300	612,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data.

1/ Does not include: consumption by foundries, chemical plants, and miscellaneous manufacturers, estimated to total about 5,200 tons of scrap per month in 1997; monthly data include estimates of about 32,000 tons of scrap per month consumed by ingot makers and several smelters that report on an annual basis.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal, and commercial bronze.

4/ Includes refinery brass, beryllium copper, phosphor copper, and aluminum bronze.

5/ Includes items indicated by symbol W.



TABLE 11  
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

Period	Crude copper 2/	Refined copper					Total refined	
		Refineries 3/	Wire rod mills 3/	Brass mills 3/	Other 4/	Comex 5/		LME 6/
1998: p/								
July	143,000	34,300	33,700	16,600	2,700	50,500	224,000	361,000
August	153,000	40,700	32,100	21,400	2,700	51,400	228,000	376,000
September	144,000	37,500	37,100	21,400	2,700	61,400	254,000	414,000
October	156,000	35,100	25,100	15,500	2,700	69,400	282,000	429,000
November	182,000	34,300	28,200	17,500	2,700	67,700	316,000	466,000
December	160,000	44,200	37,300	20,800	2,700	85,200	341,000	531,000
1999:								
January	143,000	45,600	43,100	20,600	2,700	92,400	353,000	557,000
February	148,000	44,100	32,400	22,000	2,700	104,000	377,000	582,000
March	132,000	48,200	29,700	21,000	2,700	112,000	400,000	613,000
April	147,000	49,200	27,200	21,200	2,700	120,000	420,000	641,000
May	132,000	43,200	33,600	20,800	2,700	119,000	424,000	643,000
June	135,000	44,400	31,600 r/	18,600 r/	2,700	121,000	418,000	637,000 r/
July	136,000	42,600	35,100	20,500	2,700	109,000	421,000	631,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for non-respondents.

4/ Monthly estimates based on reported and 1997 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND  
ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price cathode 1/	Comex first position 2/	LME cash price Grade A
1998:			
July	79.033	75.373	74.872
August	76.962	73.302	73.501
September	79.277	75.617	74.716
October	75.926	72.266	71.940
November	75.210	71.513	71.377
December	69.915	66.255	66.825
January - December	78.641	75.077	75.008
1999:			
January	68.726	65.066	64.902
February	67.594	63.934	63.974
March	66.164	62.504	62.505
April	70.662	67.002	66.475
May	72.720	69.060	68.528
June	69.037	65.227	64.506
July	79.677	76.017	74.371
January - July	70.654	66.973	66.466

1/ Listed as "U.S. producer cathode."

2/ Listed as "Comex high grade first position."

Sources: Platt's Metals Week and American Metal Market.

TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 scrap	Red brass turnings and borings
1998:				
July	74.10	60.60	47.95	40.00
August	72.24	59.06	49.00	40.00
September	73.31	60.33	49.00	40.00
October	71.00	57.55	47.00	40.00
November	70.37	57.14	46.00	40.00
December	65.40	52.70	41.91	36.73
January - December	73.55	60.19	49.46	40.33
1999:				
January	64.11	51.17	39.32	36.00
February	63.13	51.07	39.00	36.84
March	62.04	50.75	39.00	38.00
April	65.94	54.58	39.00	38.00
May	68.59	56.68	42.80	38.95
June	64.69	52.57	41.55	36.82
July	74.99	62.69	42.71	36.57
January - July	66.21	54.22	40.48	37.31

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1999			1999			1999			1999		
	1998	June	January - June	1998	June	January - June	1998	June	January - June	1998	June	January - June
Argentina	9,930	--	--	--	--	--	--	--	--	--	--	--
Brazil	--	--	--	--	--	--	--	--	--	9,000	2,680	7,790
Canada	1,690	--	1	140	--	--	82,100	6,650	39,800	265,000	22,300	136,000
Chile	147,000	60,500	110,000	--	--	--	24,100	7,220	31,200	78,700	9,060	34,200
Denmark	--	--	--	54	--	--	--	--	--	--	--	--
Indonesia	29,400	--	31,900	--	--	--	--	--	--	--	--	--
Japan	--	--	--	240	--	49	(2/)	--	(2/)	8,680	321	2,310
Kazakhstan	--	--	--	--	--	--	--	--	--	--	3,470	7,800
Mexico	4,980	--	500	998	99	553	29,400	1,480	11,100	178,000	5,210	69,800
Namibia	--	--	--	--	--	--	3,360	--	--	--	--	--
Netherlands	--	--	--	551	--	339	--	--	--	4,570	--	1,760
Papua New Guinea	5,900	--	--	--	--	--	--	--	--	--	--	--
Peru	18,200	--	--	--	--	--	6,870	--	2,830	128,000	16,000	90,000
Russia	--	--	--	--	--	--	--	--	--	9,170	3,580	20,300
South Africa	--	--	--	--	--	--	2,830	--	--	--	1,030	1,130
Taiwan	--	--	--	213	13	103	--	--	--	42	(2/)	41
Other	12	--	12	39	--	19	1,480	159	417	2,510	98	837
Total	217,000	60,500	143,000	2,230	112	1,060	150,000	15,500	85,400	683,000	63,800	372,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1999			1999			1999			1999		
	January -			January -			January -			January -		
	1998	June	June	1998	June	June	1998	June	June	1998	June	June
Australia	45	--	--	18	--	2	58	11	256	29	--	--
Belgium	39	--	--	323	--	(2/)	961	16	37	17	--	399
Canada	33,600	1,820	10,800	12,800	1,730	19,500	16,400	1,710	13,000	16,100	1,110	8,110
France	--	--	1	30	--	--	554	--	140	37	--	7
Germany	1,470	--	--	6,660	--	22	92	--	39	294	128	197
Hong Kong	15	--	--	--	--	--	3,350	182	1,760	1,310	26	140
Italy	34	--	--	--	--	--	354	34	239	69	--	7
Japan	1,050	--	--	34	--	--	695	151	644	17,000	--	53
Korea, Republic of	46	--	14	15	--	--	130	52	224	2,870	--	18
Mexico	97	3	8,480	1,060	--	23	1,330	21	33	11,200	377	842
Netherlands	3	--	--	4	--	10	2	--	2	10,100	--	--
Peru	--	257	325	--	--	--	--	--	5	--	--	--
Singapore	--	--	--	6	--	--	726	65	337	687	--	--
Sweden	--	--	--	945	--	--	--	--	--	3	--	--
Taiwan	(2/)	--	--	--	--	14	1,800	365	1,030	19,100	2,390	2,390
Thailand	18	--	--	--	--	--	46	--	30	5,830	--	--
Other	152	--	56	97	20	69	604	67	520	1,620	210	358
Total	36,500	2,080	19,700	22,000	1,750	19,700	27,100	2,670	18,300	86,200	4,240	12,500

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 16  
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	1999		January - June	1999		January - June	1999		January - June	1999		January - June
	1998	June		1998	June		1998	June		1998	June	
Belgium	80	--	--	476	--	213	2,730	135	695	434	--	209
Bulgaria	1,010	--	--	--	--	--	--	--	--	--	--	--
Canada	30,900	515	3,140	55,800	4,080	24,100	39,600	2,570	10,500	68,200	2,150	20,900
Chile	3,310	--	2,200	1,440	60	720	--	--	--	3	--	--
China	--	--	--	101	--	307	28,600	5,280	20,600	20,700	3,570	17,500
Colombia	836	53	320	2,560	249	1,070	--	--	--	4	--	--
Costa Rica	800	63	287	778	75	434	--	--	--	--	--	--
Dominican Republic	942	94	704	1,250	99	415	--	--	--	--	--	20
Germany	6	--	--	54	--	2	7,800	39	535	5,920	109	963
Guatemala	519	--	12	969	83	937	--	--	--	--	--	--
Hong Kong	--	--	--	113	--	11	14,400	556	3,400	23,600	225	2,030
India	--	--	--	--	--	--	3,460	92	1,550	24,900	1,340	14,800
Japan	19	37	121	126	--	49	10,200	381	3,540	10,400	611	5,540
Korea, Republic of	15	--	--	150	29	102	2,720	401	4,150	11,600	2,830	21,200
Malaysia	--	--	--	1,440	95	445	286	--	79	234	39	196
Mexico	12,900	1,770	5,990	35,400	2,690	14,900	1,230	20	227	10,200	1,360	7,930
Singapore	--	--	--	143	31	34	266	243	739	173	--	82
Spain	12	--	16	477	136	503	60	4	2,750	1,860	179	179
Taiwan	109	--	16	720	33	330	2,110	274	1,440	6,210	711	3,830
United Kingdom	--	--	--	1,090	95	500	176	61	481	3,890	166	1,280
Venezuela	462	26	191	1,500	198	710	--	--	--	37	--	--
Other	2,480	175	818	6,740 r/	559	2,970	495 r/	118	1,120	5,000 r/	542	2,930
Total	54,400	2,730	13,800	111,000	8,510	48,800	114,000	10,200	51,800	193,000	13,800	99,500

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 17  
U.S. COPPER SULFATE TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports							Exports						
	1998	1999						1998	1999					
		First quarter	Second quarter				Year to date		First quarter	Second quarter				Year to date
			April	May	June	Total				April	May	June	Total	
Australia	--	--	--	--	--	--	--	78	6	6	--	11	17	23
Belgium	715	225	18	98	194	311	535	--	--	--	--	--	--	--
Brazil	--	--	--	--	--	--	--	5	--	--	--	--	--	--
Canada	5,490	1,430	590	504	605	1,700	3,130	955	98	99	35	71	205	303
Chile	282	124	3	64	106	173	297	--	--	--	--	--	--	--
China	6,240	238	27	155	60	242	481	--	--	--	--	--	--	--
Egypt	--	--	--	--	--	--	--	7	8	--	--	--	--	8
Guatemala	--	--	--	--	--	--	--	10	10	--	--	--	--	10
Honduras	--	--	--	--	--	--	--	--	--	29	--	--	29	29
Israel	1,210	305	--	20	--	20	325	--	--	--	--	--	--	--
Jordan	--	--	--	--	--	--	--	--	10	--	--	--	--	10
Korea, Republic of	198	--	--	--	--	--	--	19	10	--	--	--	--	10
Mexico	10,500	2,470	700	698	731	2,130	4,600	38	5	--	--	1	1	6
New Zealand	--	--	--	--	--	--	--	--	4	--	--	--	--	4
Pakistan	--	--	--	--	--	--	--	--	--	--	--	19	19	19
Peru	1,740	301	159	278	137	573	875	--	--	--	--	--	--	--
Russia	840	280	--	--	--	--	280	--	--	--	--	--	--	--
Singapore	--	--	--	--	--	--	--	20	55	--	--	--	--	55
Spain	--	--	--	--	--	--	--	--	--	13	--	--	13	13
Taiwan	219	1,190	600	177	2,410	3,190	4,380	--	--	--	--	--	--	--
Other	160 r/	8 r/	37	12	4	52	60	210 r/	--	4	2	--	6	6
Total	27,600	6,580	2,130	2,010	4,250	8,390	15,000	1,340	206	152	37	102	291	497

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.